

St Louis Places &  
Neighborhoods

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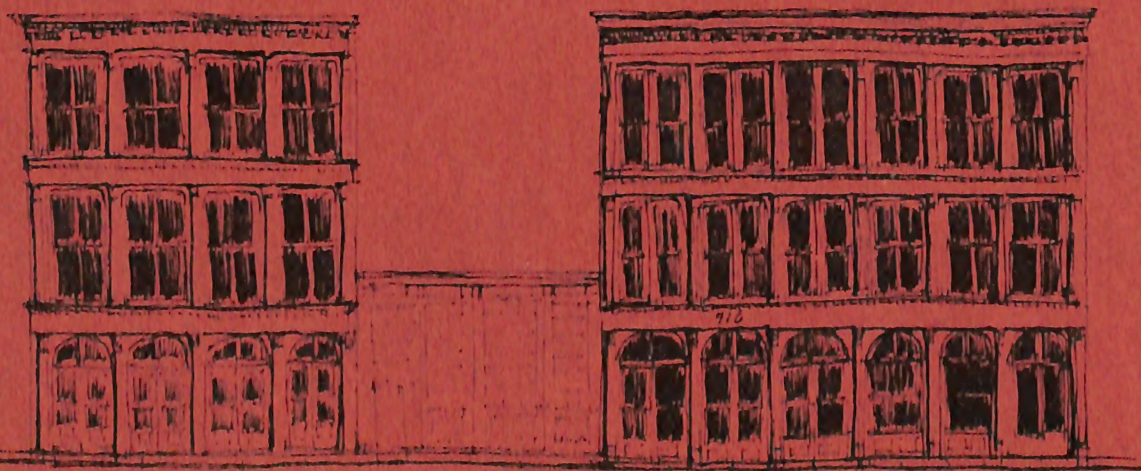
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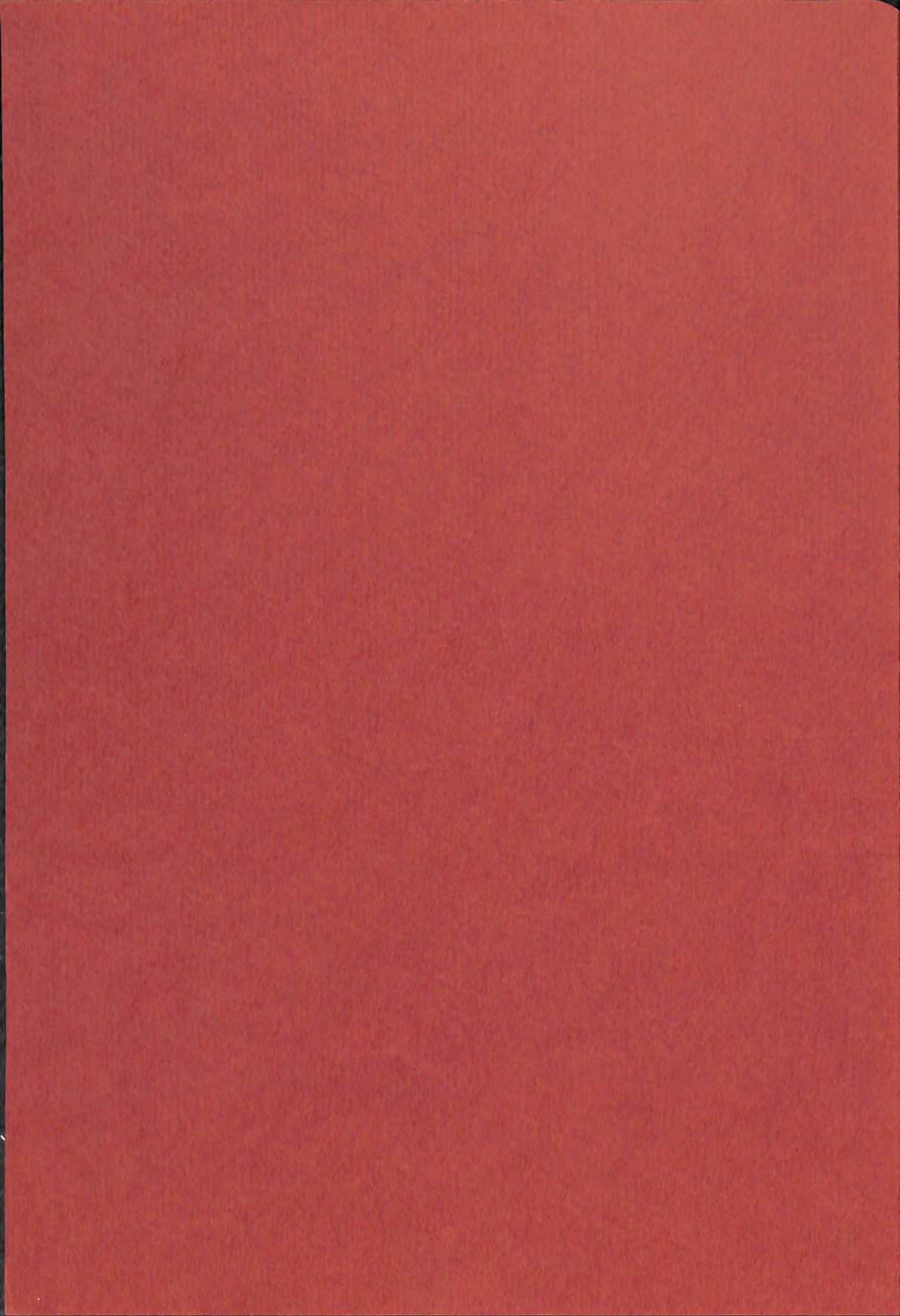
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# "LACLEDE'S LANDING" AREA







# "LACLEDE'S LANDING" AREA

THIRD STREET HIGHWAY TO WHARF  
EADS BRIDGE TO VETERANS BRIDGE

LANDMARKS ASSOCIATION OF ST. LOUIS, INC.

NOVEMBER 1968

DRAWINGS, EDITING AND DESIGN BY W. PHILIP COTTON, JR.

FRONT COVER, 716-720 N. 2ND ST.

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The traditional landing of Pierre Laclede Liguist, founder of St. Louis, is some six hundred yards to the south of the so-called "Laclede's Landing" Area, and there is no specific connection between Laclede and the area. The name was invented by Jimmy Massuchi and a reporter after Massuchi opened his bar, The Cafe Louis, around 1963.



We are "...destroying our ancient edifices to make ready the ground upon which the barbarian nomads of the future will encamp in their mechanized caravans."

T. S. ELIOT

"Notes toward the Definition of Culture"  
T. S. Eliot, N. Y. 1949, p. 111.



*About 1819-20. Exhibiting the Fortifications  
of Various Periods, after Collot, Beck, et al.*

..... DeLeyba's Intrenchments, 1780. b: Fort San Carlos, 178a  
[a,b,c,d,e,f]: Cruzat's Wooden Stockade, ca. 1781.  
a, a, a: Stockade. d, d: Wooden bastions.  
b: Stone tower called Fort San Carlos.  
c, c, c: Wooden demilunes. e: Stone demilune, ca 1781.  
f, f, f: Gates.

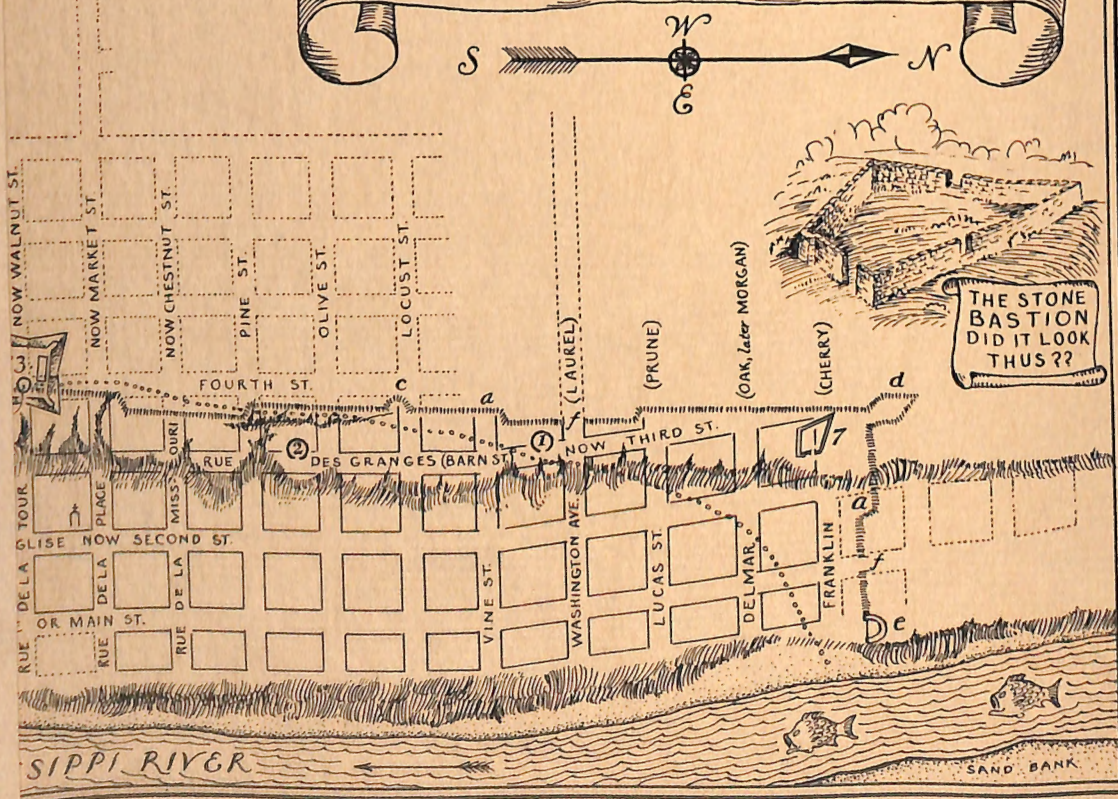
3: The "Fort on the Hill" erected by Lt. Gov. Trudeau 1792-3. See also inset plan at left.

1, 2, 4, 5: Round stone towers constructed in 1797.

6: Log Blockhouse of 1797. (See also inset drawing).

7: Stone Bastion ca. 1789-92.

JAMES B. MUSICK 1930





# A HISTORICAL SURVEY OF LACLEDE'S LANDING

by Nelson Reed

LACLEDE'S LANDING is at the southern edge of a pre-historic Indian temple town. Twenty six mounds were grouped around a plaza, the largest of them twenty five feet high and including one called "Falling Water," by the early settlers because it was built in three terraces down the slope of the bluff. This site was a satellite town of the Cahokia center, built circa 1200 A. D. and gave Saint Louis the name "Mound City."<sup>1</sup>

LACLEDE'S LANDING was a part of the original survey for the French village which grew up around Laclede's trading post after its founding in 1764. The blocks were laid out on the pattern of New Orleans, three hundred feet square, the streets thirty two feet wide, and they have kept this form for the last two hundred years. The north-south streets were called, La Rue Principale, La Grande Rue or Rue Royale, (First); La Rue de l'Eglise, (Second); and La Rue des Granges, (Third). The east-west streets in the center of the village had informal names but none have survived from the northern edge from the French Period. The eastern six blocks of LACLEDE'S LANDING were settled by 1804, with eleven houses built of palisade logs set directly in the earth in the Creole style, and four houses built of stone. The earliest was built within two years of the founding, and others in 1768, 1769, 1770, with the first stone house erected in 1800. Landowners, if not necessarily residents, included Auguste and Pierre Chouteau, J. and N. Saint Andre, Paschall Cerre, N. H. Le Compte, F. Delorier, A. Recontre, J. Brazeau, A. V. Bouis, and two men with non-French names, Patrick Lee and J. Clamorgan.

Each of the blocks, or when subdivided, the smaller lots, were normally enclosed with eight foot palisade walls as defense against the local Indians. In 1780, a mixed force of English and Indians estimated at from 750 to 1200 strong, left Canada with orders to take Saint Louis and New Orleans, a blow against the Spanish allies of the American revolutionaries. Given advance warning, the citizens and small garrison of Saint Louis built a stone gun platform and dug a trench around the settlement. The northern end of this trench ran up from the river along the present path of Franklin Avenue to Third Street, and then south along Third. These trenches were held against the superior invading forces who attacked, according to a current military report "like madmen, with an unbelievable boldness and fury, making terrible cries and a terrible firing." The Indians were unwilling to face cannon fire, and satisfied themselves with killing twenty-one people caught outside the village, nine of them burned alive, and carrying off seventy-one into captivity. As a result of this raid,



a nine foot palisade was built on the line of the trench, with a stone demilune (half moon) on the river bluff at the foot of Franklin, and a stone bastion at Third and Franklin. The palisade rotted away in a few years, and the stone works were dismantled around 1819, when any danger from Indians was long past.<sup>2</sup>

The first apparent American change to LACLEDE'S LANDING was the renaming of the streets, Main, Second and Third, while the cross streets which are now Lucas, Delmar and Franklin, became Prune, Oak and Cherry. The scattered wood and stone Creole houses were joined by or replaced with two story brick row houses as the town began to grow. As an outfitting base and gateway to the west, Saint Louis housed a constant stream of travelers and the area became a popular hotel district. In 1819 the Missouri Hotel in block 26 was completed and used for the first meeting of the Missouri Legislature in 1821. The American was built in block 14, the National in block 66 and the Union, south of the Missouri in block 26. The nature of the area changed rapidly as Saint Louis changed from a village to a town and to a city. By 1838 a traveler remarked that "the Missouri and Union.... these are old houses and are not so much resorted by strangers as the others mentioned; their appearance is rusty and rather forbidding. They no doubt were once the principal houses in the city, but like ancient Babylon their glory has departed." Industry and shops were with private homes; Page's Mill was in block 27, a foundry in block 25 by 1840. It is probable that a few of the smaller brick buildings survive from this date.<sup>3</sup>

The Levee of LACLEDE'S LANDING shared in the rapid development of river traffic, and it was here in 1849, that the steamboat White Cloud caught fire, setting off four other steamers that were docked alongside. One of these drifted downstream, spreading the fire to twenty-nine other boats, with the flames reaching the freight stored on the levee and then the town, burning out fifteen square blocks of buildings. LACLEDE'S LANDING itself didn't suffer in this holocaust.<sup>4</sup>

LACLEDE'S LANDING assumed its present form in the decade following the Civil War, 1865-1875, on the crest of development which had made Saint Louis the fourth largest city and the third largest port in the country. By the latter date the surviving buildings on blocks 14, 15, 27 (except for the Prunty Seed building), 68, and most of the buildings on blocks 26 and 66 had been built. The Missouri Candy Company building was erected for the Excelsior Mfg. Co., a stove manufacturer, in 1874, and is illustrated in Dacus and Buel. A claim has been made that the Peper building was erected in 1862, but it does not appear in Whipple, 1870. It does appear in Dry and Compion, 1875, and there is a lithograph of it made in 1880. Between the floor plans of Whipple and the perspective of Dry and Compion, it would be



possible to establish complete ownership, usage and appearance of the area in this period. The major changes since that time are the addition to the Peper building in block 26, the Central Hardware building in block 67 and the demolition or alteration of various other buildings.<sup>5</sup>

A number of the buildings of this period have cast iron fronts and cast iron skeletons, while others use iron pillars, railings and ornamental details. These structures represent a vital page in the history of architecture, as the iron techniques led directly to the skyscraper and the curtain wall construction of today. The Swiss historian, Siegfried Giedion, in his survey from the renaissance until today (Space, Time, and Architecture, Harvard University Press, 1962), recognizes the importance of the period by devoting a chapter to the Saint Louis examples, the only time he mentions our city.

"The half deserted river front has survived as a witness to one of the most exciting periods in the development of America. Some of its commercial buildings - exhibit an architecture far in advance of the ordinary standards at the time of their erection." In urging their preservation he asks, "Is it actually so very difficult to realize that commercial buildings of the nineteenth century are as important witnesses to a period as any seventeenth century chateau?"

An important resource for LACLEDE'S LANDING can be found in the cellars and files of the old Court House. The national Park Service has preserved typical cast iron pillars, capitols, lintels and ornamental details from the buildings which were leveled for the riverfront park, along with a complete photographic file. With this material it would be possible to reconstruct some of these buildings in complete and accurate detail. This is in keeping with the nature of cast iron construction, which was prefabricated and assembled on the job site. Superintendent Leroy Brown has stated that he "would cooperate in every possible way" with such a use of this material in the LACLEDE'S LANDING area, as this would fulfill the intent of its preservation in 1939.

This post war decade was also vital to LACLEDE'S LANDING because of the construction of the Eads Bridge, completed in 1874. The bridge was a wonder of its day, and in meeting the specifications of a 520 foot clear span with a 50 foot clearance, Eads did what was considered impractical by the engineers of that time. While the bridge approach walled off the area from the center of the city, it seemed to have no immediate effect on LACLEDE'S LANDING, as two major buildings were built after its construction began, and a third shortly after its completion. Sixty-five years later however, the bridge formed the northern boundary of the Jefferson National Expansion Memorial, and saved this area from the demolition which leveled the rest of the original site of Saint Louis and spared this last group of iron front and river town buildings.



Beyond the associations of buildings, cobblestone streets and the levee, the LACLEDE'S LANDING area has living ties with the past through the descendants of those who lived and worked there. In 1793, a Spanish Land Grant of block 67 was given to Esther, a "free Mullatress" who later owned a part of block 26 and had extensive holdings in other parts of the town. The Saint Louis Association of Colored Women's Clubs, Inc. is erecting a bronze plaque in her memory and to mark the role of the negro in the early history of our city. Generations of Switzers, Albrechts and Pepers have worked and owned land in the area, representing the German contribution. Our French heritage is marked by Amedee Peugnet, a lawyer, who is the present owner of 611-619 First Street, which he inherited from the original settler, his ancestor Gregoire Sarpy. For over two hundred years this land has been held in one family and has the rare distinction for a piece of urban real estate of never being bought or sold. That unbroken descent is a symbol of this unique area, LACLEDE'S LANDING, which represents so well the past and the development of our city.

In summary, LACLEDE'S LANDING [area] has the following historic associations -

1. It was the site of a prehistoric temple town, circa 1200 AD;
2. It was part of the original village of St. Louis, 1764;
3. It was bounded by the village wall with stone fortifications and gate, and shared in the Indian attack of 1780;
4. It was the site of the first meeting of the Missouri legislature, 1821 [about 727 N. 1st St.];
5. The fire of 1849 which destroyed much of the town began here;
6. It contains the last group of buildings surviving in St. Louis from the period 1865-1875, including important iron front examples.

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<sup>1</sup> T. R. Peale's Ancient Mounds of St. Louis in 1819, Annual Report of the Smithsonian Inst. for 1861, p. 387. St. Louis and Environs, Antoine Soulard, 1804, CMHS. Plan of St. Louis Including the Late Additions, Engraved for Beck's Gazetteer, 1822.

<sup>2</sup> Auguste Chouteau map of 1780 drawn in 1825, CHMS. Soulard Map 1804. Copy of Map owned by Mrs. Juliette Christie, a niece of Leon J. Papin, showing buildings and ownership in 1804, CHMS. Beck's Gazetteer, 1822. Colonial Saint Louis, Building a Creole Capital, Charles E. Peterson, Missouri Historical Society, St. Louis, 1949.

<sup>3</sup> The Journal of Henry B. Miller, MHSC, Vol VI, 1931 #3 Ed. Thomas Maitland Marshall, p. 253. Rene Paul Map, 1844 CMHS, Hutawa Map 1842.

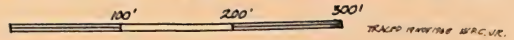
<sup>4</sup> Hand painted map, "Presented to Capt. Joseph Boyce, Founder of the Volunteer Firemen's Historical Society, William W. Barnes, Pres., Missouri Fire Co. No. 5, May 17, 1897, CMHS. St. Louis, A Fond Look Back, Publication of the First National Bank, undated.

<sup>5</sup> Tour of St. Louis, or Inside Life of a Great City, J. A. Dacus, James W. Buel, 1878, illustration of Mo. Candy - Excelsior Mfg. on p. 231. Globe Democrat Sunday Magazine, March 6, 1966, p. 12, illustration of Peper building. A Topographical Survey Drawn in Perspective A.D. 1875 by C. N. Dry, designed and edited by R. J. Compion. Whipples Insurance Map, 1870, CMHS.

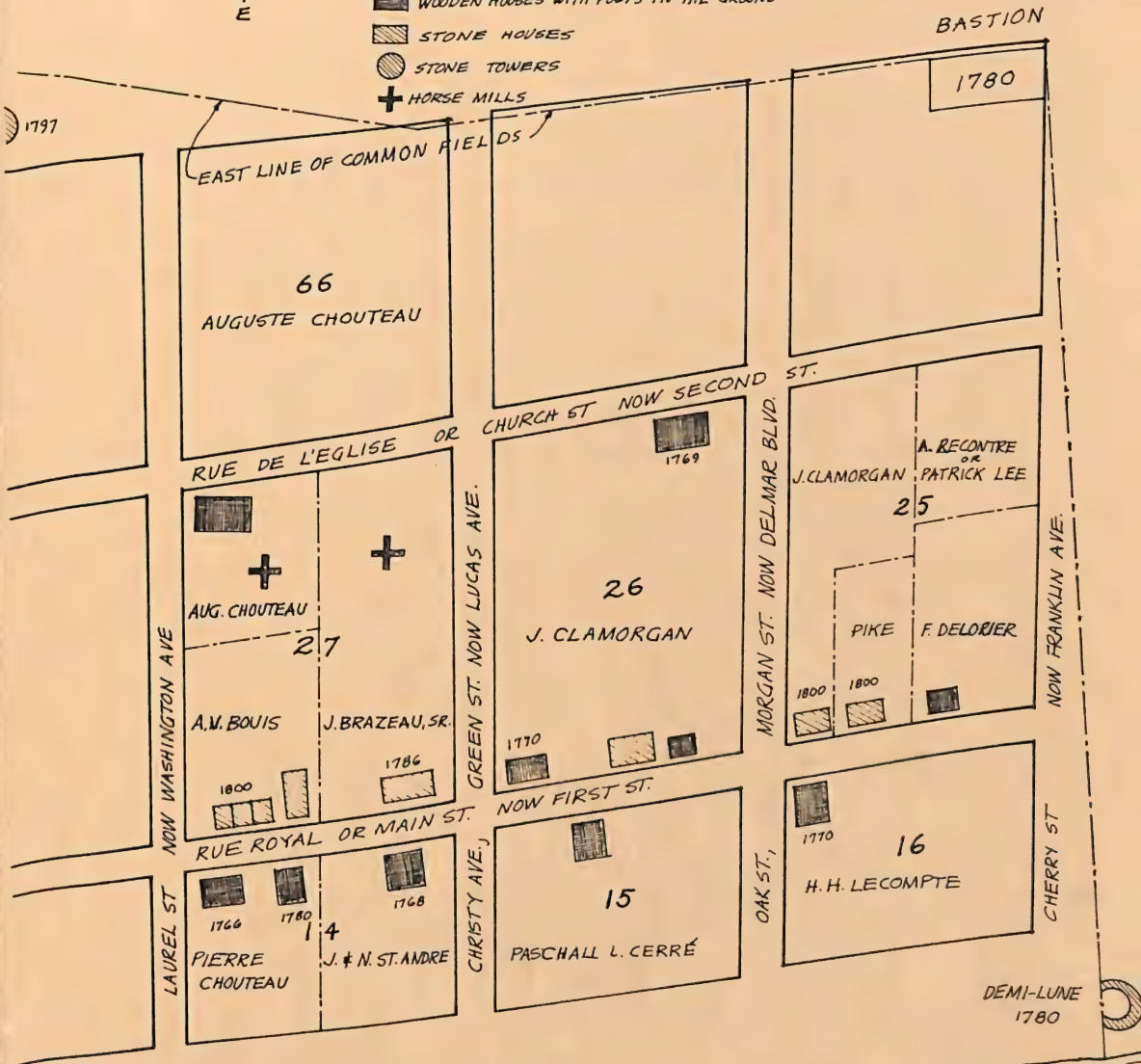


# PLAT OF ST. LOUIS WITH ALL THE HOUSES

FROM THE ORIGINAL PREPARED BY FREDERICK L. BILLON



- WOODEN HOUSES WITH POSTS IN THE GROUND
- STONE HOUSES
- STONE TOWERS
- HORSE MILLS





# NOTES ON CAST IRON FRONTS

by Walter C. Kidney

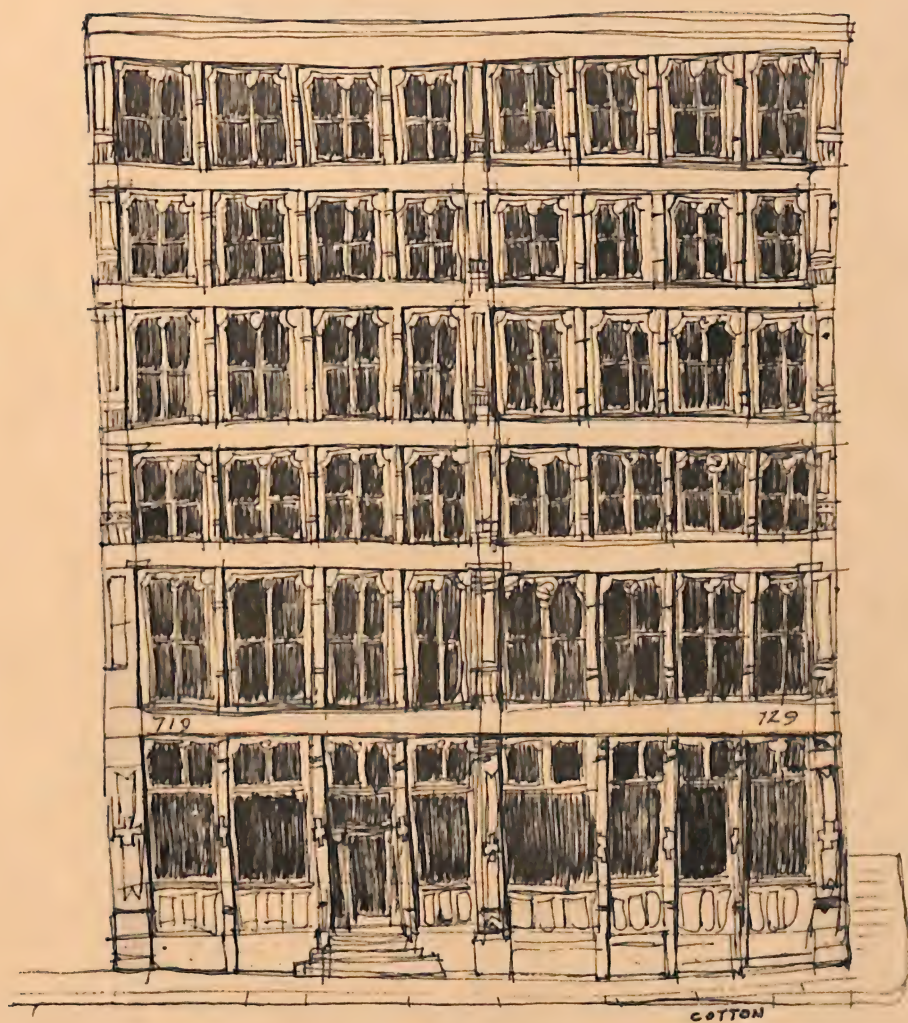
Historically, the cast iron front began modestly, in this country, at least, with a bank at Pottsville, Pennsylvania, designed by John Haviland in 1829. A small, simple building in a Renaissance style, it was faced with iron castings imitating ashlar when real stonework was found to be unavailable. (There were recent French and Russian precedents for this.) By the 1830s, it was possible to get iron columns as a substitute for the granite piers; they were in use in Paris, and were coming to be used here. By 1840, the British were making multi-story iron buildings. In 1848, James Bogardus, an American inventor, began to make whole building fronts of cast iron. Originally, he seems to have been attracted by cast iron as a cheap way of reproducing fine stonework and architectural ornamentation--culture for the masses, so to speak. As his researches developed, he became attracted to the technical possibilities of cast iron. One of his earliest buildings still stands on the lower west side [of New York City], in a most precarious condition. It has been ravaged by time and abuse so that its construction is



## CAST IRON FRONT PEPPER BUILDING

"Another important iron structure completed in 1874 was the six-story tobacco factory for Christian Pepper, at the southwest corner of First and Delmar (then known as Morgan). It was designed by Frederick W. Raeder, a St. Louis architect who had come from Coblenz, Germany about the time of the [Civil] War and did a considerable amount of work during the 1870's and 1880's. That building is still standing, and in good shape excepting that the cornice has been removed. It is an interesting study in design for cast iron buildings because it looks like it was intended only for that kind of material."





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easy to dissect with the eye: a system of hollow vertical and horizontal members, bolted together through flanges, with applied archlike pieces in a handsome pseudo-rococo style. Bogardus's success, and his much-publicized claims, brought on rivalry and stimulated the art of cast iron construction generally, so that Turpin C. Bannister could speak of the enthusiasm that prevailed by 1860 for cast iron, in various applications, as ferromania. The enthusiasm continued into the 1880s, then died. Two principal reasons might be suggested for the decline of the iron front, one practical, one aesthetic. A number of bad fires, including those at Boston and Chicago, had shown people that unprotected iron could not withstand intense heat; it would not burn, but it would crumple. Then, too, the late Victorian period was one of radical artistic change, more conscious of the sensuous quality of materials, more interested in handicraft, than the mid-Victorian period had been. With Roman brick, white and buff terra cotta, marble, various woods, shingles, and other positively eye-pleasing substances to choose from, cast iron came to seem a Caliban of materials. The sullen, brittle metal from the mold was no aesthetic match for the resilient iron that was shaped by a craftsman at the forge. That cast iron could be delicate too was proved by the lacy verandahs of New Orleans, Mobile, and Philadelphia, but the uninformed often blithely assumed that these were of wrought iron. The cast iron front, then, seemed like a product of the grisly ingenuity of America's cultural dark age, on a par with sheet iron collars, electroplated baby shoes, and patents relating to false teeth.

As early as 1939, though, the officials developing the waterfront of St. Louis as a national park determined to save some of the old cast iron fronts as a memento of the past. In 1941, Siegfried Giedion, in Space, Time, and Architecture brought James Bogardus and the cast iron front to the notice of architecture lovers, and it was perhaps this that caused a regrowth of interest in the subject. Today, the cast iron front has friends and admirers again. Such tours as that of the Cast Iron District [in New York City], led last June by Henry Hope Reed, are opening the eyes of the interested public to the quality of this work.





# ST. LOUIS IN 1780

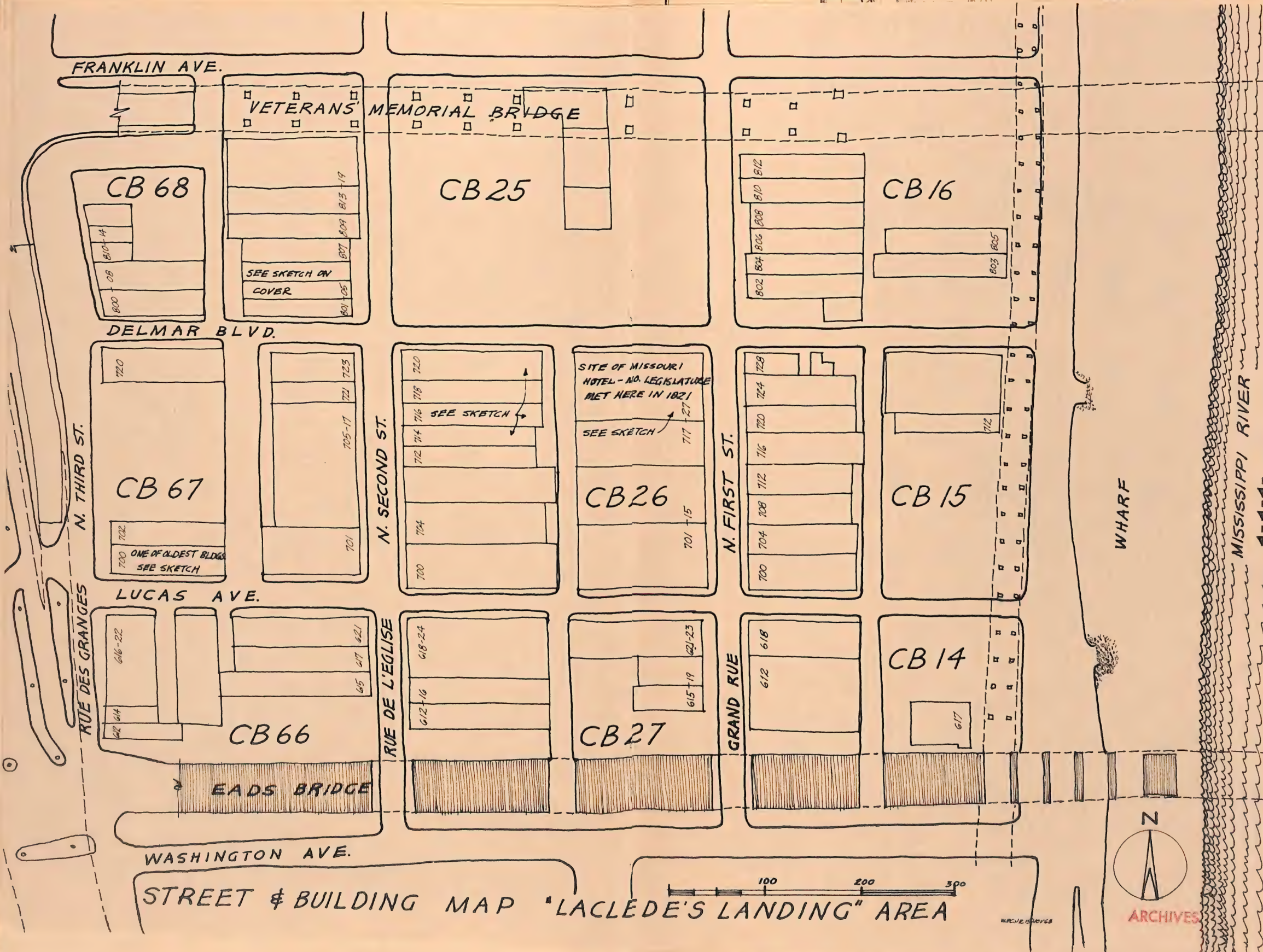
*from the original map made by*  
**AUGUSTE CHOUTEAU,**  
*and now on file in the US Records office*  
*constructed and engraved for*  
**CAMPBELL'S GAZETTEER OF MISSOURI.**

**EXPLANATION,**  
The shaded portions represent holes in the original map.

*Engraving signed and dated by Act of Congress in the year 1874 by Sils Chapman in the office of the Librarian of Congress at Washington.*

[illegible]





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### THE AREA'S GREEK REVIVAL BUILDING

One of the oldest buildings in the "Laclede's Landing" Area. Greek Revival, style of the 1840's, usually found only in river towns. The simplicity, crispness, interest in geometrical form for its own sake and proportions characterize this building as a Greek Revival building; it is akin to the Pontalba Building in New Orleans which was designed between 1836 and 1846. Note the small windows in the cornice.



# NOTES FOR AN ARCHITECTURAL PROGRAM FOR REDEVELOPMENT OF "LACLEDE'S LANDING" AREA

by W. Philip Cotton, Jr.

If a program had been written for the redevelopment of "Laclede's Landing" Area it should have provided, among other considerations, that

1. the proposed plan preserve and rehabilitate sufficient existing buildings to maintain the commercial riverfront character of the area,
2. it should respect the old street layout and the natural slope of the river bank,
3. new buildings should respect and relate to the character of the area and should be carefully considered in the overall spatial composition of the riverfront area.
4. proper emphasis and relationship be given to the Mississippi River, the Eads Bridge and the Gateway Arch,
5. new uses will not overtax the rather limited vehicular access to the area,
6. due consideration be given to the needs of the citizens of St. Louis as well as those of the many visitors who come to the riverfront area.





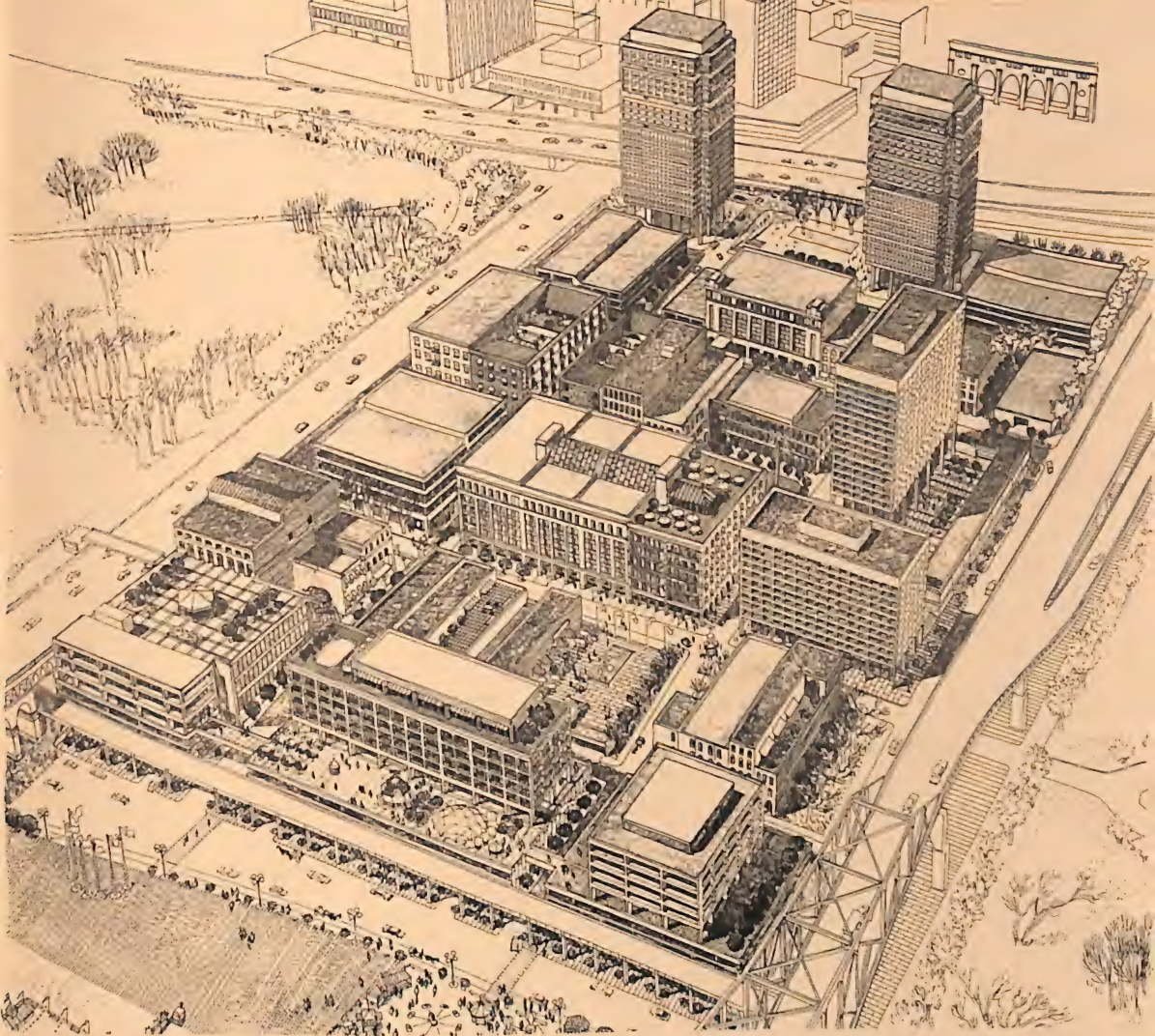
## RIVER CENTER

Schwarz & Van Hoefen, Architects

The River Center proposal calls for demolition of all existing structures and the creation of a residentially centered complex of 1854 apartment units in buildings of varying heights with moderate to high rents. Included are retail and service shops of 43,200 sq. ft. primarily for the residents, parking on three levels for 2,467 cars, a 510 room motor hotel and an office building of 421,450 sq. ft. The central esplanade would be oriented to the river. It is proposed at the riverfront to form the "St. Louis Levee Square" by recreating commercial riverfront buildings of the 1850's. This would be the last stage of the project which would cost an estimated \$70 million spread over seven years.

The enthusiasm of John Albury Bryan for the Eads Bridge caused him to point out the proposed opening of the vista down to the river along the north side of the bridge as a good feature of the River Center proposal.





## LACLEDE'S LANDING

Hellmuth, Obata & Kassabaum, Inc., Architects

The Laclede's Landing proposal calls for the retention and improvement of approximately half of the existing structures in the area and the erection of new buildings within the existing street pattern for residential, commercial and light industrial uses, including 630 apartment units, parking garages for 1,765 cars, a 140 unit motel, 553,817 sq. ft. of office space, 138,885 sq. ft. of light industrial space, and 113,578 sq. ft. of wholesale exhibit space.

The preservation of the existing architectural character of the area is integral to this proposal. It will include a series of plazas and courtyards located throughout the project as most of the first floor space would be devoted to restaurants, shops, theaters etc. catering to visitors as well as St. Louis area residents. Development cost is estimated at \$40 million spread over a ten year schedule of completion.



# LANDMARKS RESOLUTION

THE FOLLOWING RESOLUTIONS WERE PASSED AT THE MEETING OF THE BOARD OF GOVERNORS, LANDMARKS ASSOCIATION OF ST. LOUIS, INC., HELD WEDNESDAY, FEBRUARY 1, 1967.

## LACLEDE'S LANDING

LANDMARKS ASSOCIATION OF ST. LOUIS RE-AFFIRMS ITS STAND ON THE IMPORTANCE OF PRESERVING THE AREA CALLED "LACLEDE'S LANDING", ST. LOUIS' LAST MAJOR CONNECTING LINK WITH OUR CITY'S HERITAGES AS A RIVER PORT AND PIONEER GATEWAY, AND THE ONLY REMAINING PLACE WHERE THE ORIGINAL STREET PATTERN OF EARLY ST. LOUIS CAN BE EXPERIENCED.

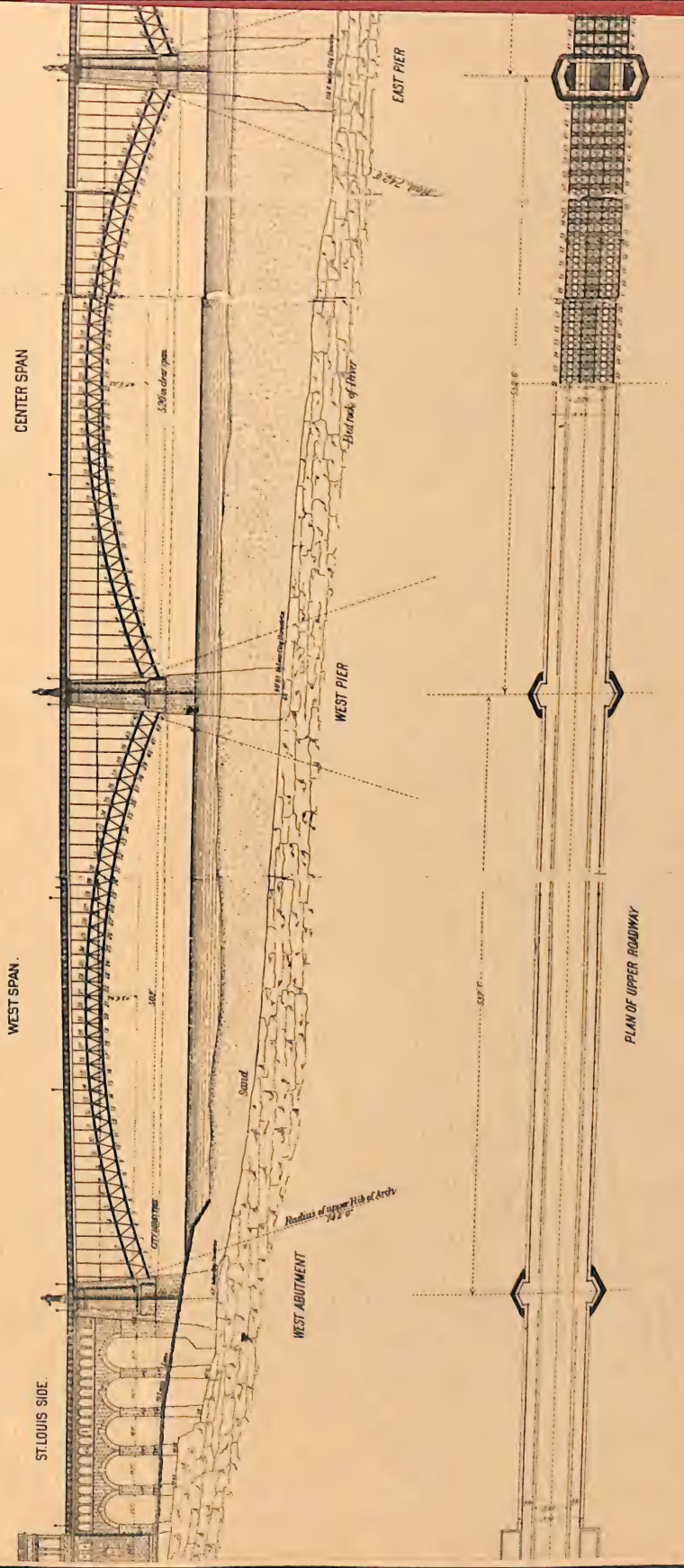
LANDMARKS RECOMMENDS THAT THE BOARD OF ALDERMEN OF THE CITY OF ST. LOUIS REJECT THE PROPOSAL FOR THE TOTAL DEMOLITION AND OBLITERATION OF THIS AREA, AS PROVIDED FOR IN THE PRESENT RIVER CENTER PLAN, A CONCEPT WHICH MIGHT MORE EFFECTIVELY BE LOCATED ON ANOTHER SITE.

LANDMARKS RECOMMENDS FURTHER THAT A MUCH IMPROVED AND MORE SPECIFICALLY DETAILED PLAN BE PREPARED FOR THE DEVELOPMENT AND PRESERVATION OF WHAT IS A UNIQUE AND IRREPLACEABLE LANDMARK, "LACLEDE'S LANDING".

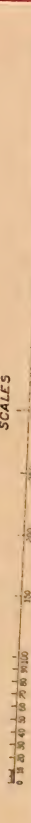


# ILLINOIS AND ST. LOUIS BRIDGE

JAMES B. EADS, CHIEF ENGINEER.



SCALES



ASBUT. N. B. 1776 ST. LOUIS



# A SHORT HISTORY OF THE EADS BRIDGE

by John Albury Bryan

It was after the [Civil] War that the largest and most costly iron project in St. Louis history got under way. The bridge across the Mississippi, which was widely publicized, sometimes was referred to as "The St. Louis Bridge"; sometimes as "The Great Iron Bridge"; and finally "The Eads Bridge". Begun in 1867 by Captain James Buchanan Eads of St. Louis, it was the first one across the Mississippi below its junction with the Missouri River. The Rock Island Bridge, built before the War, was a considerable distance north of the place where the Missouri joins the Mississippi and gives its muddy, turbulent character to the whole stream that flows from St. Louis to the Gulf. The point selected for the St. Louis crossing is known as the narrowest and deepest stretch in the mileage below the junction of the two main streams; and Captain Eads' feet had several times touched the bottom of it during those several years when he was in the business of salvaging sunken boats. He knew perfectly well the long and dangerous task that lay before him when he first published his drawings in the architectural and engineering journals of the United States and Great Britain. Technical and financial publications in London were particularly interested, since much of the money to be advanced for the project was to come from London bankers, after bankers in St. Louis had pledged a large share. William McPherson of St. Louis was one of the most enthusiastic backers of the project, but died during the seven-year period that construction was under way, and his estate suffered much from the fact that he was not on hand to save his family from some of the scull-duggery that entered into the financial history of one of the greatest civic undertakings in the annals of this City. The plans of the Bridge showed three spans of iron and steel, resting on masonry piers. The upper deck was designed to carry vehicular and pedestrian traffic, while the lower deck carries two tracks for railroads.

The most authoritative account of the St. Louis Bridge is the History written in 1881 by Prof. Calvin M. Woodward; and today there are very few copies available to the general public--one at Mercantile Library, St. Louis Public Library and at the



Library of Washington University. In it we find the annual reports made by Captain Eads to his Board of Directors, and many other documents that have been generally omitted from newspaper stories of Eads Bridge.

By December, 1871 it was apparent that the available funds of the Company were inadequate to meet the increased cost of the Bridge. The delay in the construction of the superstructure, coupled with the exaggerated reports of difficulties encountered by the contractors in trying to get Mr. Eads to modify the design made some of the stockholders uneasy. At a meeting in New York, on the 20th of December, 1871, Andrew Carnegie offered a resolution calling for the appointment of "an engineer of prominence in the profession and of experience in bridge-building, who in connection with the chief engineer, should have authority to alter the details and curtail existing plans, should the same be found necessary to insure the early completion of the Bridge at the least possible expense." The firm of Carnegie, Kloman & Co., of Pittsburgh, had the contract for erection of the superstructure under the name of the Keystone Bridge Company, and although the motive of Mr. Carnegie in offering the resolution was evidently a desire to see the chief engineer overruled in the interest of the contractors,<sup>1</sup> Mr. Eads favored the adoption of the resolution. The services of Mr. James Laurie, C. E., were secured on January 3, 1872 and Mr. Laurie immediately visited St. Louis. He made a thorough examination of plans, contracts, and workmanship, with every facility put at his disposal by Mr. Eads and his assistants. Mr. Laurie's report suggested among other things that: Building the four towers be carried to the level of the roadway only; that the cornices be omitted on the superstructure, including those on the piers and abutments; and omission of the arcades at the West and East Entrances. The adoption of some of his suggestions would have effected some saving, but in each case it would have been at the cost of grace and beauty in the Bridge.<sup>2</sup> The general architectural features of the Bridge, including the approaches, had been the result of careful study. The design in all its parts was the work of Mr. Eads, but on certain matters of detail he had consulted Mr. George I. Barnett, a St. Louis architect of good taste and judgment, and had adopted the style of ornamentation for the piers and the arcade over the approaches on his suggestion; and to mar the appearance of a bridge costing several millions for the purpose of saving a few thousands would have been unpardonable.<sup>2</sup>



This excerpt from Mr. Eads' Report to the Directors for the year 1868 contains a thought regarding architectural and engineering design which will come as a surprise to those who have been reading recent architectural histories wherein it is claimed that during the mid-nineteenth century the engineers and the scientists had very little respect for architects:

"We are too prone to associate our contemplation of the beautiful in architecture and engineering with an idea of costliness, which is not always just. It is easy to prove that in no other form could the material in those members of your Bridge which impart to it the chief feature of its gracefulness be used with such economy."

Still another excerpt from that same Report shows that Captain Eads had a broad knowledge of the way that iron had been used structurally for more than half a century before he began his Bridge at St. Louis:

"The effort to create a want of confidence in the safety of your Bridge was supported, to a certain extent, by the fact that the late convention of engineers and steamboat owners in their report declared there was no engineering precedent for a span of 500 feet. By reference to a copy, in my office, of the official publication made by the Dutch Government in January, 1866, of the details and plans of the Kuilinburg Bridge over the Leck, an arm of the Rhine in Holland, you will see that its greatest opening is spanned by a truss of 515 feet in length. This bridge has a double-track railway through it and the truss weighs near 2,400 tons.

In 1801 the great Scottish engineer, Thomas Telford, proposed to replace the old London Bridge with one of cast iron, having a single arm of 600-feet span. His suspension bridge over the Menai Straits is one of the most substantial structures of the kind in the world, and spans 570 feet. --- Surely the recorded judgment of such a man as Telford, when sustained by the most eminent men of his day, asserting the practicability of a cast iron arch of 600 feet span in 1801 furnishes some engineering precedent to justify a span of 100 feet less in 1867."

One of the most exciting moments in the building of the Bridge came at 10 P.M. on September 17, 1873 when two iron tubular ribs of the first arch were successfully closed. Many of the men had been constantly on duty for sixty-five hours and were nearly exhausted.<sup>3</sup> The next morning Col. Flad cabled to Captain Eads in London the news, and he was thus able to reassure the English bankers who were becoming anxious about the completion date of the structure. Bringing the ends of the half-ribs into correct line and elevation by means of the suspension cables and the lateral bracing was the work of the construction engineers, but beyond that point the engineer's power over the rib was small. Temperature was evidently the most important factor in the problem, and under the circumstances at that time, it was largely beyond human control. A change of 50 degrees between a cool September morn and the direct heat of the afternoon sun reduced the openings for the last tubes two inches.

The mathematical theory of the arch for the Bridge was developed by Charles Pfeifer, and it was elaborated upon by Professor William Chauvenet, who at that time was Chancellor of Washington University in St. Louis. The method of erection was devised by Colonel Henry Flad of St. Louis, a veteran of the Union Army. The total cost of this remarkable bridge was more than six million dollars, and it was dedicated on July 4, 1874 in the presence of an estimated 50,000 persons--the largest crowd ever assembled on the riverfront at St. Louis. A full-page drawing of the Bridge and an autographed picture of James B. Eads formed the frontispiece of Pictorial St. Louis by Camille Dry, and published by R. J. Compton & Company of St. Louis in 1875--the most unusual history of any American city that has been assembled.

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<sup>1</sup> Calvin M. Woodward - History of the St. Louis Bridge (1881) page 113

<sup>2</sup> Calvin M. Woodward - History of the St. Louis Bridge (1881) page 114

<sup>3</sup> Calvin M. Woodward - History of the St. Louis Bridge (1881) page 177



## CREDITS, REFERENCES, ACKNOWLEDGMENTS, ETC.

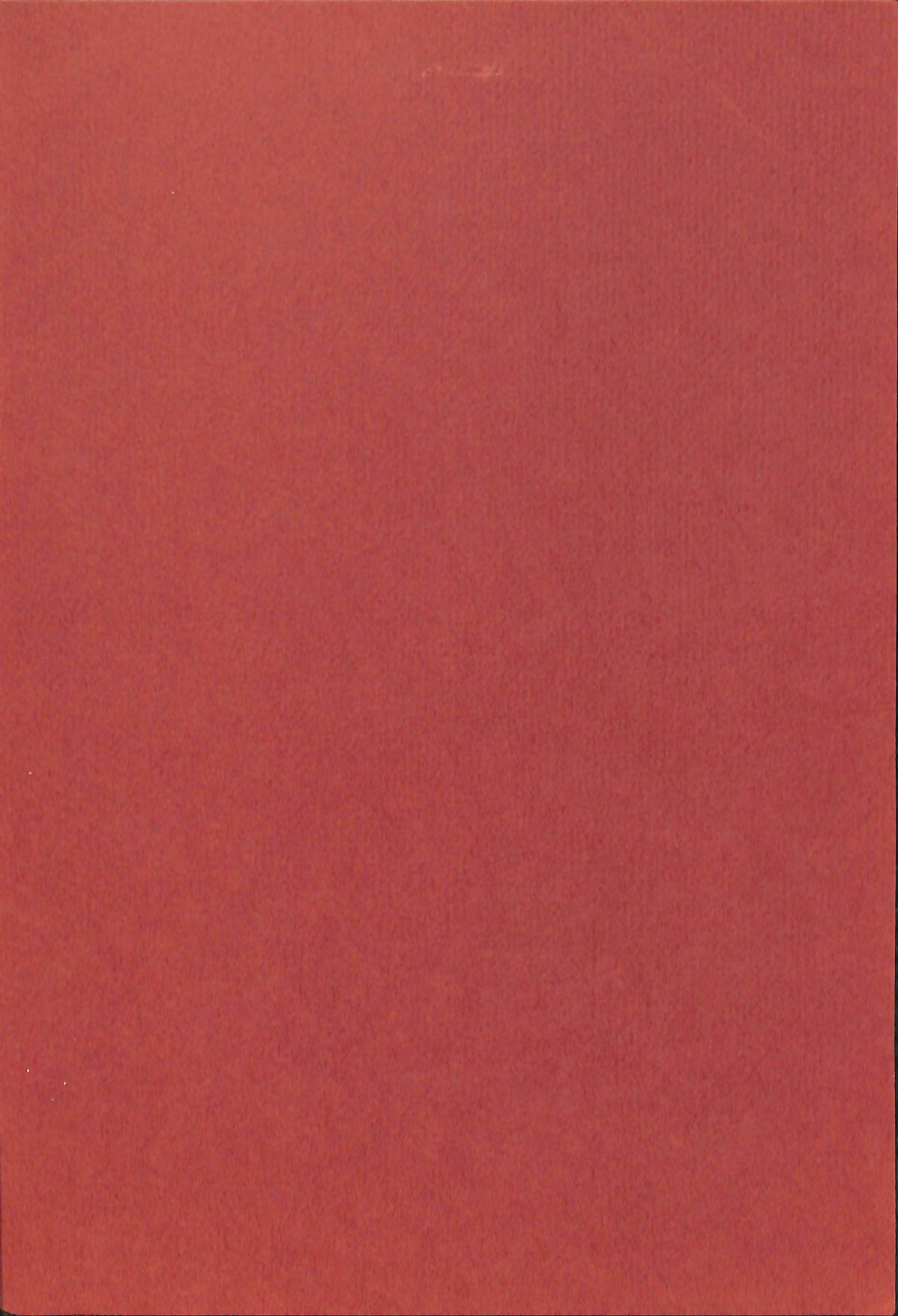
- p. 2 Musick Map is reproduced from St. Louis as a Fortified Town by James B. Musick, St. Louis (privately printed) 1941
- p. 7 Billon Map is traced from an enlargement made by N. L. Wayman in 1953 of the Plat of St. Louis with all the houses on March 10, 1804, from the original prepared by Frederick L. Billon
- p. 8 "Notes on Cast Iron Fronts" is the title given by the editor to the last half of an article entitled "Ferromania and After" by Walter C. Kidney which appeared in the quarterly newsletter of the Victorian Society in America, vol. 2, no. 2, July 1968
- p. 8 Note on Peper Building from Iron in St. Louis Architecture Between 1800 and 1900 by John Albury Bryan, St. Louis, Mo., August, 1961, p. 53
- p. 9 Ink drawing of Peper Building, 719-729 N. 1st Street, by W. Philip Cotton, Jr., Nov. 1968
- p. 11 Map of A. Chouteau copied from The Early Histories of St. Louis by John Francis McDermott, St. Louis, 1952
- p. 12 Map is based on "Site Plan Demolition - Exhibit 4" from First Amended Development Plan of the Levee Redevelopment Corp. for development of Laclede's Landing as supplemented to April 30, 1967 (dated March 20, 1968) with additions from Musick Map, op. cit.
- p. 14 Ink drawing at site of building at 700 N. 3rd Street by W. Philip Cotton, Jr., Oct. 1968
- p. 16 Aerial perspective River Center amended plan of River Center Redevelopment Corp., March 20, 1968, p. 16. Schwarz & Van Hoefen, Architects; Erwin Carl Schmidt, AIA, architectural delineator.
- p. 17 "Preliminary Design Plan - Exhibit 1", First Amended Development Plan of the Levee Redevelopment Corp., op. cit.
- p. 18 Landmarks Association of St. Louis, Inc. resolution, quoted from news release following board meeting Feb. 1, 1967
- p. 19 Engraving of Eads Bridge copied from History of the St. Louis Bridge by C. M. Woodward, St. Louis, 1881, frontispiece
- p. 20 from Iron in St. Louis Architecture, op. cit. pp. 40-45

Cover - Ink drawings at site by W. Philip Cotton, Jr., Nov. 1968

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Staff members of the Art, Reference, and Applied Science Depts. of the St. Louis Public Library were most helpful.









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